

# ABSTRACT

The present invention relates to the identification of macaque antibodies to human B7.1 and B7.2 by screening of phage display libraries or monkey heterohybridomas obtained using B lymphocytes from B7.1 and/or B7.2 immunized monkeys. More specifically, the invention provides four monkey monoclonal antibodies 7B6, 16C10, 7C10 and 20C9 which inhibit the B7:CD28 pathway and thereby function as effective immunosuppressants. The invention further provides the complete DNA and amino acid sequences of the light and heavy chain of three primatized antibodies derived from those monkey monoclonal antibodies which bind B7.1 and possibly B7.2, primatized 7C10, primatized 7B6 and primatized 16C10. These primatized and monkey antibodies may be used as specific immunosuppressants, e.g., for the treatment of autoimmune diseases and to prevent organ transplant rejection.

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